

112-57-8-16330

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 8, pp 41-42, (USSR)

AUTHOR: Fel'dman, M. P.

TITLE: An Economic Substantiation of the Firm Capacity of a Hydroelectric Station (Ekonomicheskoye obosnovaniye obespechennoy otdachi GES)

PERIODICAL: Tr. Mosk. energ. in-ta (Transactions of the Moscow Power-Engineering Institute), 1956, Nr 19, pp 48-57

ABSTRACT: Firm capacity is the maximum capacity of a hydroelectric station that is fully used in the system as a working power and also as a system reserve. Usually, the hydroelectric station capacity used in the year when it covered 99% of demand (without duplication) is referred to as the minimum firm capacity over many years. In particularly low-water years, the average value (over many years) of the energy deficit would constitute only a few hundredths of 1%. On the other hand, an increase in the rated capacity of a hydroelectric station would bring about an increase in the system expenses for building the reserves and for compensating the deficit in low-water years. The author

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An Economic Substantiation of the Firm Capacity of a Hydroelectric Station

points out the possibility of creating a reserve in the form of a regulating consumer. Such consumers could increase their production according to the additional yield over the rated year. The optimum value of firm capacity is determined by the minimum of people's economic expenses for production and consumption of electrical energy. This optimum value depends on the cost of the system reserve, on the degree of regulation of water flow, and on the runoff distribution within one year and over many years. Formulae are derived for determining firm capacities for various system reserves.

A.A.B.

Card 2/2

FEIDMAN, M. ■.

"Economic Grounds for the Availability of Hydro-Electric Station Capacity.
report presented at the 14th Sectional Meeting of the World Power Conference,
Montreal Canada, 7-12 Sep 1958.

FEL'DMAN, M. P.

AUTHOR: Fel'dman, M.P., Doctor of Technical Sciences; Druzhinin, I.P.
Candidate of Technical Sciences 98-58-3-11/22

TITLE: A Method of Determining the Rated Capacity of Planned
Hydroelectric Power Plants (Metodika opredeleniya raschëtnoy
vnespechennosti moshchnosti proyektiruyemykh ges)

PERIODICAL: Gidrotekhnicheskoye Stroitel'stvo, 1958, Nr 3, pp 38 - 45(USSR)

ABSTRACT: Several publications on methods of determining the guaranteed
capacity of hydroelectric power plants have come out in the
past years. This article suggests a simple method and norms
worked out and tried experimentally in the Sektsiya vodokho-
zyaystvennykh problem AN SSSR (Section of Water-Engineering
Problems of the AS USSR), the Institut energetiki AN Kazakhskoy
SSR (Institut of Energetics of the AS Kazakh SSR) and the Vodo-
energeticheskiy institut AN Armyanskoy SSR (Water-Power Institute
of the AS Armenian SSR). There are 5 graphs, 2 tables, and 10
Soviet references.

Card 1/1 1. Electric power production-USSR 2. Power plants-Design

FEL'DMAN, M.P.; MASTITSKIY, N.V. [deceased]; DRUZHININ, I.P.

Effect of natural and technical factors on the guaranteed output of
hydroelectric power stations. Probl. reg. rech. stoka no.7:32-81
'58.

(MIRA 11:9)

(Hydroelectric power stations)

FEL'DMAN, N.P.

Optimum guaranteed output of hydroelectric power stations. Probl.
reg. rech. stoka no.7:168-211 '58. (MIRA 11:9)
(Hydroelectric power stations)

FEL'DMAN, M.P.; DRUZHININ, I.P.; VELIKANOV, A.L.

Determining the rated capacity predictability of hydroelectric
power stations on the basis of flow data of the Oka and Yenisey
Rivers. Probl.reg.rech.stoka no.8:105-188 '59.

(MIRA 13:4)

(Hydroelectric power stations)

8(6)

SOV/98-59-9-7/29

AUTHOR: Beschinskiy, A.A., Engineer, and Fel'dman, M.P., Doctor
of Technical Sciences

TITLE: Increase of Water Power Economy Effect

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 9,
pp 20-27 (USSR)

ABSTRACT: Specific amounts invested per installed kw for construction of hydropower plants in USSR during the 7-10 years were too high in comparison with those invested for thermal power plants during the same period. The authors recommend measures which could cut costs of hydropower plants (by using water for other water-economy purposes more extensively). The measures have also been studied by the Energeticheskiy institut AN SSSR (Power Institute of the USSR Academy of Sciences) and by the "Gidroenergoprojekt". They explain these low costs of thermal power plants by their fast development (improved equipment and large generating

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SOV/98-59-9-7/29

Increase of Water Power Economy Effect

units, both of which increased efficiency) and by the development of stoking methods which made possible the use of cheap coals and petroleum refinery residuals as fuels. Table 2 shows economic indexes i.e. specific investments for some Soviet hydropower plants. There are 4 tables and 1 graph.

Card 2/2

FEL'DMAN, M.P., otv.red.; OKHRIN, N.V., red.izd-va; GUS'KOVA, O.M.,
tekhn.red.

[Problems in hydroelectric power production and streamflow
regulation] Problemy gidroenergetiki i regulirovaniia rechnogo
stoka. Moskva, 1960. 193 p. (MIRA 14:2)

1. Akademiya nauk SSSR. Energeticheskii institut.
(Hydroelectric power stations)

TORGOMYAN, M.S., kand. tekhn. nauk; CHILINGARYAN, L.A., kand. tekhn. nauk; SHAKHBAZIAN, Sh.A., kand. tekhn. nauk; AGAKHANYAN, G.A., kand. sel'khoz. nauk; KULOYAN, L.T., kand. tekhn. nauk; ARSHAKYAN, D.T.; BARKHUDARYAN, I.G.; SARKISYAN, S.G., kand. tekhn. nauk; MKHITARYAN, S.A.; OSEIYAN, A.M., doktor ekon. nauk, prof.; BEK-MARTYAN, B.I., kand. geogr. nauk, red.; AYVAZ'YAN, V.G., otv. red.; FEL'DMAN, M.P., otv. red.; AVETISYAN, A.A., tekhn. red.; CHAKHATYAN, TS.P., tekhn. red.

[Results of the combined studies of the Sevan problem] Rezul'taty kompleksnykh issledovaniy po Sevanskoi probleme. Erevan, Izd-vo Akad. nauk Armyanskoi SSR. Vol.3. [Water resources and power engineering] Vodnoe khoziaistvo i energetika. 1962. 330 p. (MIRA 15:11)

1. Akademiya nauk Armyanskoy SSR, Erivan. Institut vodnykh problem.

(Sevan Lake region--Water resources development)
(Sevan Lake region--Power engineering)

FEL'DMAN, M. P., doktor tekhn. nauk

Economically justified hydroelectric power construction at a
new stage. Gidr. stroi. 33 no.12:22-25 D '62.

(MIRA 16:1)

(Hydroelectric power stations)

BETCHEN, R.Y., A.A.; FEILMAN, M.D.

Methodology for determining the effectiveness of a water resource development and the distribution of expenditures between its components. Probl. gidroenerg. i reg. rech. stoka no.31:3-44 '63. (MIRA18:3)

AYVAZ'YAN, V.G., prof.; VELIKANOV, A.L., kand. tekhn. nauk;
KOROBOVA, D.N., mlad. nauchn. sotr.; FEL'DMAN, M.P.,
doktor tekhn. nauk; VASIL'YEV, Yu.F., red.

[Selection of power parameters and structural dimensions
of hydroelectric power stations] Vybór energeticheskikh
parametrov i razmerov sooruzhenii gidroelektrostantsii.
Moskva, Nauka, 1965. 135 p. (MIRA 18:4)

1. Moscow. Energeticheskiy institut.

FEL'DMAN, M.P.; SAVINYKH, Ye.N.

Machine for cutting off billets with a diameter up to 52 mm.
Mashinostroenie no.1:101 Ja-F '62. (MIRA 15:2)
(Cutting machines)

FEL'IMAN, M.P.; SAVINYKH, Ye.N.

Device for milling wooden wedges. Mashinostroenie no.1:101-102
Ja-F '62.

(MIRA 15:2)

(Woodworking machinery)

FEL'DMAN, M.P.; SAVINYKH, Ye.N.

Machine for milling two flats on fixture parts. Mashinostroenie
no.1:102 Ja-F '62. (MIRA 15:2)
(Milling machines)

"APPROVED FOR RELEASE: Monday, July 31, 2000

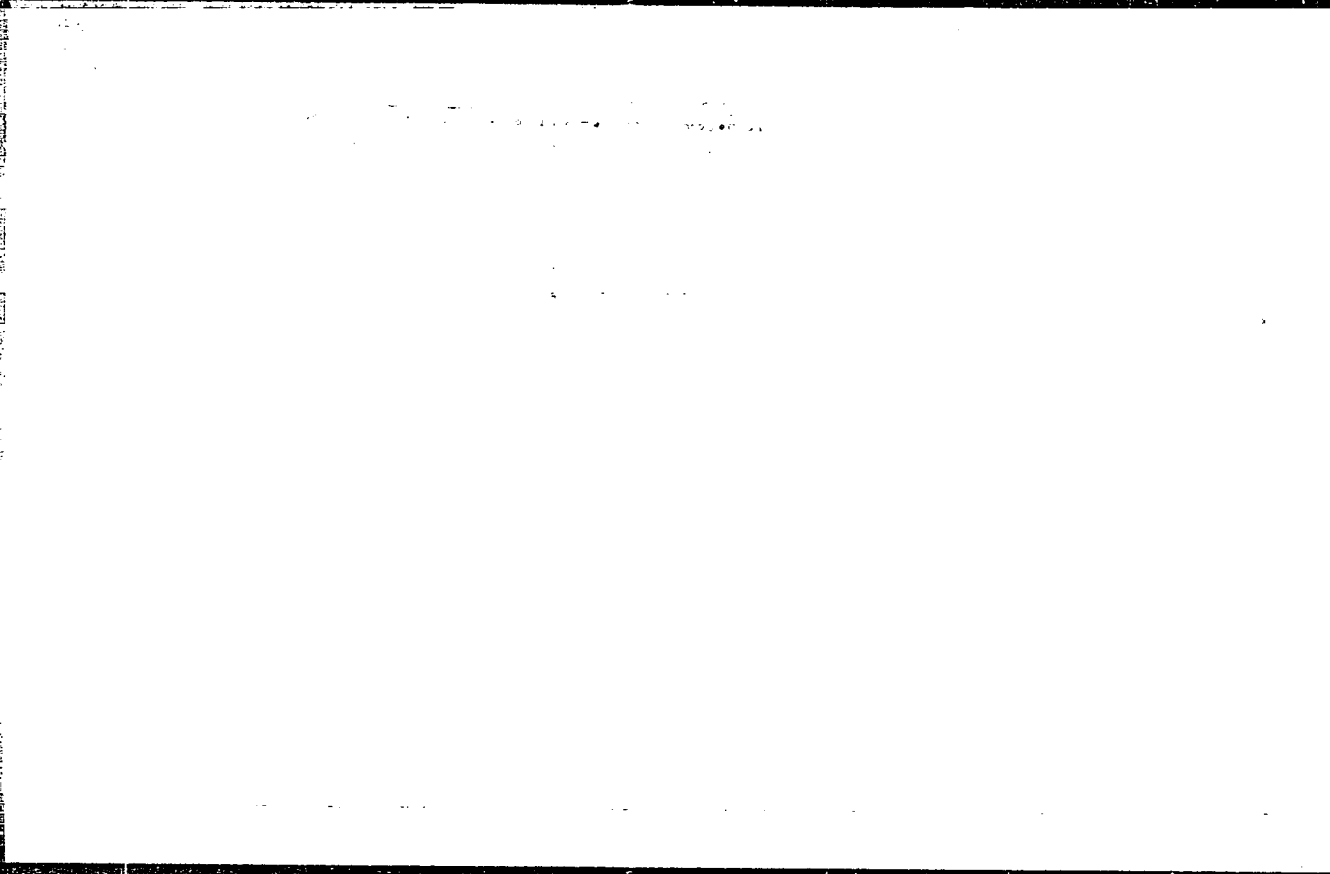
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APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000412820

FEL'DMAN, M.R.

Calculating elastic plates. Dop. AN URSR no.5: 451-457 '55.
(MIRA 9:3)

1. Dnipropetrovs'kiy inshenerno-budivl'niy institut. Predstaviv
diysniy chlen AN URSR G.M. Savin.
(Elastic plates and shells)

FEL'DMAN, M.R.

Longitudinal bending of bars taking into consideration plastic
aftereffect. Izv.AN Arm.SSR.Ser.FMNT nauk 9 no.1:75-86 '56.

(MLRA 9:8)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.
(Deformations (Mechanics))

FEL'DMAN, M.P. (Dnepropetrovsk).

Stability of bars with a varying cross section. Izv. AN Ukr. S.S.R.
Ser. fiz.-mat. nauk 10 no. 4: 19-28 '57. (MLRA 10:9)

1. Dnepropetrovskiy inzhenerno-stroitel'nyy institut.
(Elastic rods and wires)

FEL'DMAN, M.R. (Dnipropetrovs'k).

~~Torsional vibrations of bevel shafts~~ [in Ukrainian with summary in Russian]. Prykl. mekh. 4 no.1:105-111 '58. (MIRA 11:4)

1. Dnipropetrovs'kiy inzhenerno-budivel'niy institut.
(Shafting—Vibration)

16(1)

AUTHOR: Fel'dman, M.R.

SOV/22-12-3-2/9

TITLE: On a Difference Method for the Investigation of the Stability and Oscillations of Plates

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1959, Vol 12, Nr 3, pp 15-28 (USSR)

ABSTRACT: In the domain H let be given the differential equation

$$(1) \quad K[w] = L[w] - \lambda N[w] - f = 0,$$

where $L[w]$ and $N[w]$ are linear homogeneous differential operators the principal parts of which have the form

$$\sum_{\tau \leq m} C_{\tau_1, \dots, \tau_n} \frac{\partial^{\tau} w(x_1, x_2, \dots, x_n)}{\partial x_1^{\tau_1} \dots \partial x_n^{\tau_n}} \text{ and } \sum_{\tau \leq 1} M_{\tau_1, \dots, \tau_n} \frac{\partial^{\tau} w(x_1, \dots, x_n)}{\partial x_1^{\tau_1} \dots \partial x_n^{\tau_n}},$$

respectively, $\tau = \tau_1 + \tau_2 + \dots + \tau_n$ and C, M, f are given functions of the x_1, \dots, x_n ; $m > 1$. Let the boundary condition be

$$\sum_{\tau \leq m-1} E_{\tau_1, \dots, \tau_n} \frac{\partial^{\tau} w}{\partial x_1^{\tau_1} \dots \partial x_n^{\tau_n}} = 0,$$

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On a Difference Method for the Investigation of the SOV/22-12-3-2/9
Stability and Oscillations of Plates

where the E are known. For the determination of the unknown function w the author covers the domain H with a rectangular net with the node $Q_j(x_{1j}, x_{2j}, \dots, x_{nj})$, $j=1, 2, \dots, N$ and approximates (1) by the system of linear algebraic equations

$$(2) \sum_{z=-q}^q [S_{i,y+z}(x_{1,j})w_{1,j+z}(x_{1,j}) - \lambda R_{1j}(x_{1,j})w_{1,j}(x_{1,j})] = f_{1,j}(x_{1,j}).$$

Now the solution is sought in the form

$$w(x_{1,j}) = \sum_{k,t,\dots,r} A_{k,t,\dots,r} \psi_{1k}(x_{1j}) \psi_{2t}(x_{2j}) \dots \psi_{nr}(x_{nj}).$$

The postulate that (1) vanishes identically for the given boundary conditions is replaced by the weaker postulate that $K[w(x_{1,j})]$ is orthogonal to all functions $\psi_{1,\nu}(x_{1,j})$. These assumptions lead to a system of equations from which λ can be determined in the homogeneous case and the A can be determined in the inhomogeneous case. The method converges in all cases where the method of Bubnov-Galerkin is convergent. The author uses the method for the investigation of the stability and

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. On a Difference Method for the Investigation of the SOV/22-12-3-2/9
Stability and Oscillations of Plates

oscillations of a quadratic plate which is supported freely and which is charged in its plane along the boundary by uniformly distributed forces acting normally to the boundary, and for the examination of the stability of a plate of variable thickness for a compressive load by steps. The deviation from the rigorous solution amounts 2%. An example is calculated. There are 6 figures, 1 table, and 12 Soviet references.

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut (Dnepropetrovsk Institute of Civil Engineering)

SUBMITTED: May 26, 1958

Card 3/3

FEL'DMAN, M.R., dotsent, kand.fiz.-matem.nauk (Dnepropetrovsk)

Theory of bending of rectangular plates with large deflections.
Issl. po teor. sooruzh, no. 9:173-190 '60. (MIRA 14:1)
(Elastic plates and shells)

Plastiny, 1960

BOROVSKIY, P. V.

PHASE I BOOK EXPLOITATION

SOV/6206 25

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universiteta] 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alomyae, V. V. Bolotin, A. S. Vol'mir, N. S. Ganiyev, A. L. Gol'denveyzen, N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

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Transactions of the Conference (Cont.)

SOV/6206

75

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

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Transactions of the Conference (Cont.)	SOV/6206
Fel'dman, M. R. Vibration of an Anisotropic Plate Making Allowance for the Rheological Properties of the Material	382
Filin, A. P. Analysis of Arbitrarily Shaped Shells Based on a Discrete Design Scheme	388
Fleyshman, N. P. Analysis of Plates With Curvilinear Stiffeners	399
Frolov, O. A. Stress Concentration in a Cylindrical Shell Weakened by a Cutout	408
Shveyko, Yu. Yu. Flutter of a Circular Cylindrical Shell	414
List of Reports Not Included in the Present Collection	419

Card 13/14

167300

109110

1969

S/020/61/137/005/012/026
B104/B214

AUTHOR: Fel'dman, M. R.

TITLE: The stability of orthotropic plates with step like change
in rigidity

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 5, 1961, 1086-1089

TEXT: Oscillations of orthotropic rectangular plates are studied, the plates showing a step like variation of the rigidity. The plates are assumed to be under the action of a force of compression T in the direction of the length. The problem is solved with the help of finite differences and the method of Bubnov-Galerkin. By means of a rectangular lattice each side of the plate is divided into n equal parts with lattice constant $\epsilon = a/n$. The divergence u_0 of the plate satisfies in each part of the lattice the difference equation:

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B104/B214

The stability of orthotropic ...

$$2(3 + 3k_1 + 4k_2)u_0 - 4(k_1 + k_2)(u_1 + u_2) - 4(1 + k_1)(u_1 + u_2) + \\ + 2k_2(u_3 + u_4 + u_5 + u_6) + k_2(u_{11} + u_{12}) + u_9 + u_{10} = \\ = \lambda \frac{P_v}{R_v} (2u_0 - u_1 - u_2) + Fu_0, \quad (1) \quad (1).$$

Here, $P_v = (T_0 + T_1 + \dots + T_v)/T_0$, $T = \sum_v T_v$, v is the number of parts of the plate, $R_v = D_v/D_0$; $\lambda = a^2 T_0/D_0 n^2$; $F = \rho p^2 a^4/D_0 n^4$; $k_2 = D_2/D_0$; $k_3 = D_3/D_0$; $D_0 = E_0 h^3/12(1 - \mu_1 \mu_2)$ is the cylindrical rigidity of the first part along ox , D_v the same for the v -th part, $D_2 = E_2 h^3/12(1 - \mu_1 \mu_2)$; $D_3 = D_0 \mu_2 + 2D_k$; $D_k = Gh^3/12$; p is the frequency of oscillations, and ρ the mass of the plate per unit area. A formula is obtained for the relation between the frequencies p of the characteristic oscillations and

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B104/B214.

The stability of orthotropic ...

the compression T acting along the length of the plate at $\xi = 0$,
 $\xi = 0.5$, and $\xi = 1$:

$$\rho^2 = \frac{9.65(R_1 + P_1)}{9a^2(R_1 + 1)} \left[\frac{19.34(1 + k_1 + 2k_2)D_1}{a^2(R_1 + P_1)} - T \right]. \quad (3) \quad (3).$$

From this equation the frequency of the oscillations can be found if the magnitude of the force of compression is known. The fundamental frequency of the characteristic oscillations is found for $T = 0$. The critical load is written in the form: $T_{cr} = VD_v/a_{red}^2$. Here, $a_{red} = \alpha a$ the reduced side of the plate, α is a coefficient depending on the manner of loading and the boundary conditions of the plate. Thus, the problem is reduced to finding the α values for different ratios between l_y and R_y (Fig. 2). The principle of Volterra-Rabotnov (Ref. 3: Yu. N. Rabotnov, Prikl. matem. i mekh., 12, v. 1, (1948)) is used for taking into account

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S/020/61/137/005/012/026
B104/B214

The stability of orthotropic ...

the effect of rheologic material properties on the critical forces of orthotropic plates, and with the help of integral operators the following approximate formula is derived for the critical forces:

$$T_{kp}(t) \approx T_{kp}(0) \left\{ 1 - \sum_{i=1}^3 \frac{a_i}{\beta_i} [1 - \exp(\gamma_i \beta_i t)^{1-\alpha}] \right\}. \quad (12). \quad (12).$$

Here, $T_{kp} = T_{cr}$, $a_1 = E_{10} h \delta_1 (1 + 2\mu_2)/T$; $a_2 = E_{20} h \delta_2/T$;

$a_3 = 4G_0 h^3 \delta_3 (1 - \mu_1 \mu_2)/T$; $\beta_i = \delta_i \tau_i^{-1}$, τ_i are the relaxation times,

$\delta_1 = (E_{10} - E_{1\infty})/E_{10}$; $\delta_2 = (E_{20} - E_{2\infty})/E_{20}$; $\delta_3 = (G_0 - G_{\infty})/G_0$;

$\gamma_1 = (1 - \alpha)^{1-\alpha}$; E_{10} , E_{20} , and G_0 are the instantaneous moduli

of elasticity and shear. N. Kh. Arutyunyan, M. I. Rozovskiy, A. Yu.

Ishlinskiy and A. R. Rzhnitsyn are mentioned. There are 2 figures and 7 Soviet-bloc references.

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S/020/61/137/005/012/026,
B104/B214

The stability of orthotropic ...

ASSOCIATION: Dnepropetrovskiy inzhenerno-stroitel'nyy institut
(Dnepropetrovsk Institute of Civil Engineering)

PRESENTED: November 2, 1960, by Yu. N. Rabotnov, Academician

SUBMITTED: January 30, 1960

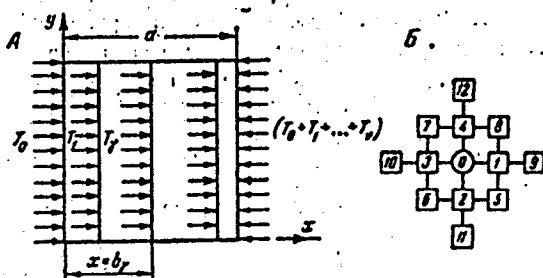


Fig. 1

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S/879/62/000/000/037/088
D234/D308

AUTHOR: Fel'dman, M. R. (Dnepropetrovsk)

TITLE: Dynamical stability of orthotropic plates

SOURCE: Teoriya plastin i obolochek; trudy II Vsesoyuznoy konfe-
rentsi, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo
AN USSR, 1962, 244-248

TEXT: Using a combination of the difference method with the
Bubnov-Galerkin method, the author derives the equation

$$\frac{d^2 T(t)}{dt^2} + \omega_k^2 \left[1 + \frac{N + N_t \cos \theta t}{N_k} \right] T(t) = 0$$

or

$$\frac{d^2 T(t)}{dt^2} + \Omega_k^2 \left[1 + \frac{N_t \cos \theta t}{N_k + N} \right] T(t) = 0 \quad (13)$$

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Dynamical stability of ...

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D234/D308

for a rectangular plate and quotes the equations of dynamical stability obtained by him for 1) a square plate freely supported and compressed in two directions perpendicular to each other, 2) a square plate with step-wise varying rigidity, uniformly compressed in one direction.. For the first case he indicates the most dangerous domain of instability, as well as the minimum values of critical static force and minimum natural frequency when the plate is isotropic. The frequency is

$$\omega_1 = \frac{19.73}{a^2} \sqrt{\frac{D}{m}} \quad (16)$$

There are 2 figures.

Card 2/2

GLAVINSKIY, David Germanovich; DENSHCHIKOV, Mikhail Tikhonovich;
PIGUZOV, A.T., inzh., retsenzent; FEL'DMAN, M.S., inzh.,
retsenzent; POPOV, V.I., prof., spets. red.; KOVALEVSKAYA,
I.I., red.; SOKOLOVA, I.A., tekhn. red.

[Mechanization and automation in the brewing industry] Me-
khanizatsiia i avtomatizatsiia pivovarennogo proizvodstva.
Moskva, Izd-vo "Pishchevaia promyshlennost'," 1964. 419 p.
(MIRA 17:4)

L 56492-65
ACCESSION NR: AP5017800

UR/0286/65/000/011/0031/0031
631.859.12.002.2

4
B

AUTHOR: Karatayev, I. I.; Mel'nik, B. D.; Repenkova, T. G.; Sviridova, A. G.;
~~Doktorov, N. I.~~; Nazarov, G. N. Raygorodskiy, I. M.; Vasil'yev, B. T.; Bystrov,
M. V.; Babaryka, I. F.; Kuzyak, F. A.; Fel'dman, M. V.; Soverchenko, D. A.;
Buslakova, L. P.; Toroptseva, N. P.; Lyubimov, S. V.; Ul'yanov, A. T.; Andras,
V. V.; Sobchuk, Yu. I.; Tsetlina, M. M.; Andreyev, V. V.; Kramer, G. L.

TITLE: A method for producing phosphoro-potassium fertilizers. Class 16, No. 171-
409

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 31

TOPIC TAGS: fertilizer, phosphate, potassium

ABSTRACT: This Author's Certificate introduces a method for producing phosphoro-
potassium fertilizers using cement dust (waste from cement production) as the potas-
sium raw material. The process of adding potassium to the product is simplified
and evaporation is prevented by using a 20% excess of an acid which directly neutra-
lizes the cement dust for breaking down the phosphate raw material.

Cord 1/2

L 56192-65

ACCESSION NR: AP5017800

ASSOCIATION: none

SUBMITTED: 29Mar62

ENCL: 00

SUB CODE: GC, LS

NO REF SOV: 000

OTHER: 000

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2/2

FELDMAN, M. Ya.		PROCEDURES AND PROPERTIES INDEX	
Ca		1	
<p>Dehydrating inorganic compounds. M. Ya. Feldman. Russ. 47,077, July 31, 1936. Cond. with or without vapors, e. g., of KOH or NaOH, are atomized in a stream of a combustible gas, such as H₂, or by means of injection by the latter, or by any other mechanical means, and the combustible gas is burned.</p>			
ASA-55A METALLURGICAL LITERATURE CLASSIFICATION			
FROM SYNDICATE		COLLATION	
LAPTOP 14		LAPTOP 14	

FEL'DIMAN, M. Ya.									
Plasticizer for polyvinyl chloride. M. Ya. Fel'diman and A. I. Krymova. U.S.S.R. 63,704, Jan. 31, 1949. Anthracene oil chlorinated at a temp. not exceeding 100°, having a sp. gr. of 1.3-1.4, and contg. up to 20 % of Cl is used as a plasticizer for polyvinyl chloride. M. Huseh									
ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION									

PROCEDURES AND PROPERTIES INDEX									
<p>FEL'DMAN, M.Ya.</p> <p>Method of calculation of the molecular refraction of binary mixtures. M. Ya. Fel'dman, <i>J. Gen. Chem.</i> (U.S.S.R.) 16, 43-6(1940)(English summary). It is possible to calc. mol. refraction values for binary mixts. without detg. their mean mol. wt. A formula was derived for a case of linear dependence of refraction on compn. and was checked with PhMe-Cl₂Cl₃. The equation is: $MR = aR_1/(1 - bR_1)$, where R_1 is specific refraction of the mixt., and $a = [(MR_1 - MR_2)M_1 - MR_2(M_1 - M_2)]/(MR_1 - MR_2)$, and $b = (M_1 - M_2)/(MR_1 - MR_2)$, where MR = mol. refraction of pure components and M = their mol. wts. G. M. K.</p>									
<p>ASO-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>									
<p>ISSUE SYMBOLIC</p>									
<p>ISSUE SYMBOL</p>									

EX-ERPTA MEDICA Sec 6 Vol 13/2 Internal Med. Aug 59

4425. THE TECHNIQUE OF DUODENAL INTUBATION (Russian text) - Feldman M. Ya. - ZDRAVOOKHR. KIR. 1957, 1 (58-59)
In attempting duodenal intubation it is not always possible to pass the tube into the duodenum because of pyloric spasm or looping of the tube in the stomach. The author recommends the following method: after the patient has swallowed the tube up to the first marking a clock is placed in front of him, and he is asked to swallow the tube very slowly up to the second marking (within 20 min.), and then up to the third marking (25 min.). This method is efficient and simple. (S)

FEL'DMAN, M.Ya.

Method for determining protein and nonprotein nitrogen in the blood
in Conway dishes modified by S.R.Mardashev and N.N.Lestrova. Lab.
delo 3 no.4:53-54 J1-Ag '57. (MLRA 10:8)

1. Iz laboratorii Bazar-Kurganskoy rayonnoy bol'nitsy (glavnyy
vrach V.V.Ryabova)
(BLOOD--ANALYSIS) (LABORATORIES--EQUIPMENT AND SUPPLIES)
(NITROGEN)

FIL'DMAN, M.Ya.

Method of determining free formaldehyde in the presence of
amino acid - formaldehyde and protein - formaldehyde compounds
[with summary in English]. Biokhimiia 23 no.6:917-923 N-D '58
(MIRA 11:12)

1. Biokhimicheskaya laboratoriya Nauchno-issledovatel'skogo
instituta preparatov protiv poliomielita, Moskva.
(FORMALDEHYDE)

FEL'DMAN, M.Ya.

Chemical control of inactivated vaccine against poliomyelitis. Vop.
virus. 4 no.6:689-692 N-D '59. (MIRA 13:3)

1. Biokhimicheskaya laboratoriya Moskovskogo nauchno-issledovatel'-
skogo instituta perparatov protiv poliomyelita.
(POLIOMYELITIS immunol.)
(VACCINES)

FEL'DMAN, M.Ya.

Studies on free formaldehyde quantities during the inactivation of
poliomyelitis virus with formaline. Biul. eksp. biol. i med. 47 no.8:
85-87 Ag '59. (MIRA 12:11)

1. Iz biokhimicheskoy laboratorii (sav. - kand. biolog. nauk N.V.
Kholchev) Moskovskogo nauchno-issledovatel'skogo instituta preparatov
protiv poliomyelita (nauchnyy rukovoditel' - prof. V.D. Solov'yev).
Predstavlena deystvitel'nyy chlenom AMN SSSR A.Ye. Braunshteynom.
(FORMALDEHYDE)
(POLIOMYELITIS VIRUSES)

FEL'DMAN, M.Ya.

Interaction of purine and pyrimidine derivatives with formaldehyde
in aqueous solutions. Biokhimiia 25 no. 3:563-569 My-Je '60.

(MIRA 14:4)

1. Biochemical Laboratory, Research Institute of Anti-poliomyelitis
Preparations, Moscow.

(PURINES) (PYRIMIDINES) (FORMALDEHYDE)

FEL'DMAN, M.Ya.

Spectrophotometric study of the reaction of ribonucleic acid
with formaldehyde. Biokhimiia 25 no.5:937-940 8-0 '60.

(MIRA 14:1)

1. Biochemical Laboratory, Research Institute of Viral Preparations,
Moscow.

(NUCLEIC ACIDS)

(FORMALDEHYDE)

FELDMAN, M. Ya.

"A Study of the Reaction of Nucleic Acids with Formaldehyde."

report submitted for the 5th Intl. Congress of Biochemistry, Moscow,
10-16 August 1961

Inst. of Viral Preparations, Moscow.

FEL'DMAN, M.Ya.

Condensation of 6-aminouracils with formaldehyde. Biokhimiia 26 no.5
S-0 '61. (MIRA 14:12)

1. Biochemical Laboratory, Research Institute of Viral Preparations,
Moscow.

(FORMALDEHYDE)

(URACIL)

FEL'DMAN, M.Ya.

Condensation of adenine and adenosine with formaldehyde. Biokhimiia
27 no.2:378-384, Mr-Apr '62. (MIRA 15:8)

1. Laboratory of Biochemistry of Viruses, Institute of Radiation
and Physico-Chemical Biology, Academy of Sciences of the U.S.S.R.,
Moscow.

(ADENINE) (CONDENSATION PRODUCTS (CHEMISTRY) (FORMALDEHYDE)

FEL'DMAN, M. Ya.

Chemical fundamentals in the preparation of viral formalinized vaccines. Vop. med. Khim. 9 no. 3:232-239 My-Je '63.
(MIRA 17:9)

1. Laboratoriya biokhimi i virusov Instituta radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR, Moskva.

FEL'DMAN, M.Ya.

Nonenzymic model of the inhibitory action of reagent excess.
Biokhimiia 29 no.4:720-727 J1-Ag '64.

(MIRA 18:6)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii
AN SSSR, Moskva.

FEL'DMAN, M.Ya.

Formation of methylene bridges in the reaction of ribonucleic acid with formaldehyde. Biokhimiia 30 no.1:203-207 Ja-F '65.
(MIRA 18:6)

1. Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR, Moskva.

YERULOV, S.A.; FELDMAN, N.B.; KODUCHOVA, Y.V.

Study on the solid solutions of (Glycine, 3 x) H_2O . Izv. AN
SSSR. Ser. Khim. 2) no. 11:2253-2254 N '65. (MIRA 18:11)

L. Yessynguly nauchno-issledovatel'skiy Institut khimicheskikh
reaktsiy i esbo chistykh khimicheskikh veshchestv.

SUKHACHEV, D.A.; FEL'DMAN, M.Ye.; inzhener.

Mining 530 meters of entries a month with the PK-2m cutter-loader.
Mekh.trud.rab. 9 no.10:5-6 0 '55. (MLRA 9:1)

1.Nachal'nik shakhty No.22 "Lomintsevsкая" (for Sukhachev).
(Coal mining machinery)

SUKHACHEV, D.A.; FEL'DMAN, M.Ye., inzhener.

Sinking 902 meters of preparatory shafts a month with the PK-2m combine. Mekh. trud. rab. 10 no.8:10-11 Ag '56. (MLRA 9:10)

1. Nachal'nik shakhty no. 22 "Lomintsevsкая." (for Sukhachev).
(Coal mining machinery)

FEL'DMAN, M.Ye., inzh.; REYZIN, B.S., inzh.

One thousand three hundred and four meters of driftage in one
month. Shakht.stroi. no.10:21-23 0 '57. (MIRA 10:12)
(Mining engineering)

FEL'DMAN, M.Ye., inzh.

Mechanization and automation of dump car cleaning to control
the freezing of ore and rock. Izv. vys. uch. zav.; gor. zhur.
5 no.6:150-155 '62. (MIRA 15:9)

1. Gosudarstvennyy institut po proyektirovaniyu gornyykh
predpriyatiy zhelezorudnoy i margantsevoy promyshlennosti i
promyshlennosti nemetallicheskiykh iskopayemykh. Rekomendovana
kafedroy avtomatizatsii proizvodstvennykh protessov Sverdlovskogo
gornogo instituta imeni Vakhrusheva.

(Mine railroads—Cars) (Automatic control)

FEL'DMAN, H.

Without economic analysis. Fin.SSSR 17 no.7:53-55 J1 '56. (MIRA 9:9)
(Kazakhstan--Budget)

FEL'DMAN, N.

Serious shortcomings. Visnyk AN URSS 28 no.3:52-54 Mr '57.
(MLRA 10:5)

1. Zamestitel' nachal'nika kontrol'no-revizionnogo upravleniya Ministerstva finansov Kazakhskoy SSR.
(Kazakhstan--Budget)

MILCU, St. M., Academician; FELDMAN, N.; WOLFSHAUT, C.

Polyalgias of asthenic neurosis or neurotic pseudo-rheumatism.
Probl. reumat., Bucur. 4:21-26 1956.

(NEURASTHENIA, complications
polyalgias, pseudo-rheum.)

(RHEUMATISM

pseudo-rheum., neurotic, causing polyalgias)

(PAIN, etiol. & pathogen.

polyalgia caused by neurasthenia)

MILCU, St., M., Acad.; FELDMAN, N., dr.; DAMIAN, Elena, chimista

Urinary elimination of 17-ketosteroids in arthrosis and
spondylosis after Herculane sulphurous thermal therapy.
Med. int., Bucur. 9 no.1:27-36 Jan 57.

1. In colaborare cu Institutul de balneologie, Sectia clinica
de reumatologie, colectivul dr. I. Stoia.

(SPONDYLOSIS, therapy

balneother., thermal, sulphurous, eff. on 17-
ketosteroids in urine)

(ARTHRITIS, RHEUMATOID, therapy

(SAME)

(BALNEOLOGY

thermal sulphurous ther. of spondylosis & rheum.
arthritis)

~~FELDMAN, IV.~~

MILCU, St.-M., Academician: FELDMAN, N.

Intradermo-paravertebral placenta therapy. Bul. stiint., sect.
med. 8 no.3:829-839 July-Sept 56.

1. Comunicare prezentata in Sesiunea generala stiintifica a
Academiei R.P.R., in sedinta din 30 iunie 1955.

(PLACENTA, extracts

ther. of spinal, arthritic & other dis.)

(SPINE, diseases

ther., placental extract, admin.)

(JOINTS, diseases

ther., placenta extract, intradermo-paravertebral admin.)

FEL'DMAN, N.B., dorozhnyy master (stantsiya Sverdlovsk-Passazhirskiy)

Urgent problems. Put' i put.khos. no.9:44-45 S '57. (MIRA 10:10)
(Railroads--Track)

L 7835-66 EWP(e)/EPA(s)-2/ENT(m)/ENP(1)/EPA(w)-2/ENP(t)/ENP(b)/EWA(h)
 ACC NR: AP5028118 IJP(c) JD/NH SOURCE CODE: UR/0048/65/029/011/2050/2054

AUTHOR: Fedulov, S.A.; Fel'dman, N.B.; Rodicheva, Ye.N. 78

ORG: All-Union Scientific Research Institute of Chemical Reagents and High Purity Chemicals (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv)

TITLE: Investigation of lead titanate - lanthanum titanate solid solutions (Report, Fourth All-Union Conference on Ferro-electricity held at Rostov-on-the Don 12-16 September 1964)

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 11, 1965, 2050-2054

TOPIC TAGS: ferroelectric material, piezoelectric ceramic, solid solution, lead, lanthanum, titanate, dielectric constant, dielectric loss, Curie point, lattice parameter, electric polarization, piezoelectric modulus

ABSTRACT: The ferroelectric and piezoelectric properties of $(1-x)\text{PbTiO}_3 + x\text{La}_{2/3}\text{TiO}_3$ solid solutions were investigated. The specimens were synthesized from the oxides by a special ceramic technique described in an Inventor's Certificate by I.A.Grozman, L.Z.Rusakov, and N.B.Fel'dman (Avtor. svid. No. 135394 ot 25 marta 1960) and involving 2-hour roastings at 910 and 1180-1270°C. X-ray studies showed that solid solutions were formed for values of x up to 0.5 and above. The volume of the unit cell decreased with increasing x ; from this it is concluded that the trivalent

Card 1/2

L 7835-66

ACC NR: AP5028118

lanthanum ions replace the divalent lead rather than the tetravalent titanium ions. The dielectric constant and electric conductivity were measured at different temperatures, dielectric hysteresis loops were observed, and the piezoelectric properties were investigated by the resonance method. The solid solutions showed both ferroelectric and piezoelectric properties. The Curie temperature decreased with increasing x from approximately 500°C for $x = 0$ to 0°C for $x = 0.5$; this decrease of the Curie temperature is ascribed to the fact that the trivalent lanthanum ions are considerably less polarizable than the divalent lead ions that they replace. The radial electromechanical coupling constants of polarized specimens ranged between 0.1 and 0.2, the piezoelectric activity increasing with increasing x . The electric conductivities of the solid solutions were in general less than that of pure lead titanate. By extrapolating hysteresis loop measurements to $x = 0$, values of 4 kV/cm and $50 \mu\text{C}/\text{cm}^2$ were found for the coercive field and spontaneous polarization of lead titanate. This value of the polarization is in good agreement with the finding of G. Shirano and S. Hochino (proc. Inst. Rad. Engrs., 43, No. 12, 1738 (1955)), but the value $90\text{--}100 \mu\text{C}/\text{cm}^2$ calculated from the latent heat of the phase transformation is believed to be more nearly correct. The discrepancy is ascribed to the use of ceramic specimens rather than single crystals. It is concluded that the investigated materials will find practical application, owing to their rather high Curie points and their appreciable piezoelectric activities. Orig. art. has: 6 figures.

SUB CODE: SS,EM,ME

SUBM DATE: 00/

ORIG. REF: 007

OTH REF: 005

Card 2/2 570

L 27166-66 EMT(1)/EWP(a)/EEG(k)-2 IJP(a) WH
ACC NR: AP6009839 SOURCE CODE: UR/0413/66/000/004/0032/0033

INVENTOR: Fel'dman, N. B.; Filimoncheva, K. I.

ORG: none

TITLE: Increasing the piezoactivity of ceramic piezoelements. Class 21, No. 178864.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 32-33

TOPIC TAGS: piezoactivity, piezoelectric ceramic element

ABSTRACT: An Author Certificate has been issued describing a method using heat treatment to increase the piezoactivity of piezoelectric ceramic elements. To raise the electromechanical coupling coefficient during radial vibrations, the blanks of piezoceramic elements with electrodes applied to them are heated to temperatures of 20-70C above the Curie point, cooled at maximum rate to room temperature, and polarized. [LD]

SUB CODE: 11/ SUBM DATE: 14Mar64/

Card 1/1

UDC: 621.372.412.002.2

SENG'YEV, N.V.; VETROV, I.Ye.; DROZDOV, A.A., inzh., prepodavatel';
SAVEL'YEV, S.T., inzh., prepodavatel'; SURKIS, M.N., inzh.,
prepodavatel'; BULATOV, B.N., inzh., prepodavatel'; DUKLER, V.D.,
inzh., prepodavatel'; FEL'DMAN, N.F., prepodavatel'

Once more about the training of locomotive servicing brigades.
Elek. i tep. tiaga 5 no.5:44 My '61. (MIRA 14:7)

1. Nachal'nik Kiyevskoy tekhnicheskoy shkoly (for Sergeyev).
2. Zamestitel' nachal'nika Kiyevskoy tekhnicheskoy shkoly
(for Vetrov). 3. Kiyevskaya tekhnicheskaya shkola (for
DrozdoV, Savel'yev, Surkis, Bulatov, Dukler, Fel'dman).
(Railroads--Employees)
(Locomotives--Maintenance and repair)

30777. FEL'DMAN, N. G. AND BRAUN, A. D.

Toksichnost' krasiteley i svyazyvaniye ikh nativnymi belkami. Doklady
Akad. nauk SSSR, Novaya seriya, T. LXVIII, No. 4, 1949, s. 757-60. -- Bibliogr:
8 nazv.

DEMIRCHOOGLIAN, G.G.

Valuable work on the histology of the retina ("Ontogenesis and histopathology of the retina; variation of its neural elements in an experiment." N.G. Fel'dman. Reviewed by G.G. Demirchoglian). Izv.AN Arm.SSR.Biol.i sel'khoz. nauki. 4 no.12:1185-1188 '51.

(MLRA 9:8)

(RETINA) (FEL'DMAN, N.G.)

FELDMAN, N.G.

MYTNIK, P. Ya.; FEL'DMAN, N.G.

Outstanding histologist M.D.Lavdovskii, 1847-1903. Arkh.anat.gist.
1 embr. 3 no.3:86-93 J1-S '54. (MLBA 7:12)

(BIOGRAPHIES,

Lavdovskii, Mikhail D.)

(HISTOLOGY, history,

in Russian, contributions of M.D.Lavdovskii)

FEL'DMAN, Natal'ya Grigor'evna; ZINOV'YEV, I.A., redaktor; POPRYADUKHIN,
K.A., tekhnicheskii redaktor

M.D.lavdovskii, 1847-1902. Moskva, Gos. izd-vo med. lit-ry, 1956.
169 p. (MIRA 10:1)
(LAVDOVSKII, MIKHAIL DORMIDONTOVICH, 1847-1902)

T

Country : USSR
Category: Human and Animal Physiology. Sense Organs.
Vision.

Abs Jour: RZhDiol., No 19, 1958, 89349

Author : Fel'dman, H.G.
Inst : Astrakhan Medical Institute
Title : Trophic Changes of the Eyes Associated with
Disorders of Their Sensory Innervation.

Orig Pub: Tr. Astrakhansk. med. in-ta, 1956, 12, No 2,
120-133.

Abstract: No abstract.

Card : 1/1

T-137

FEL'DMAN, N.G.

Ontogenesis of the visual path in dogs and guinea pigs. Probl.fiziol.
opt. 12:409-421 '58 (MIRA 11:6)

1. Laboratoriya neyrogistologii Instituta obshchey i eksperimental'noy
patologii AMN SSSR i Kafedry gistologii Astrkhanskogo meditsinskogo
instituta.

(DOGS)

(GUINEA PIGS)

(EYE-- INNERVATION)

FEL'DMAN, N.G. (Astrakhan', ul. Shamyana, d. 41, kv. 2); KNORRE, A.G.

"Morphology of the olfactory organ" by I.A.A. Vinnikov, L.K. TITOVA.
Reviewed by N.G. Feld'man, A.G. Knorre. Arkh.anat.gist. i embr. 36
no.1:106-108 Ja '59. (MIRA 12:3)

1. Adres Knorre: Leningrad, 100, Litovskaya ul., d. 2 Pediatricheskiy
meditsinskiy institut, kafedra gistologii i embriologii.
(NOSE) (VINNIKOV, I.A.A.) (TITOVA, L.K.)

FEL'DMAN, N. I.

"Arithmetic Properties of Two Periodic Functions." Thesis for degree of Cand. Physicomathematical Sci. Sub 23 Mar 49, Sci Res Inst of Mathematics, Moscow Order of Lenin State University M. V. Lomonosov.

Summary 82, 18 Dec 52, Dissertations Presented For Degrees in Science and Engineering in Moscow in 1949. From Vechernyaya Moskva, Jan-Dec 1949.

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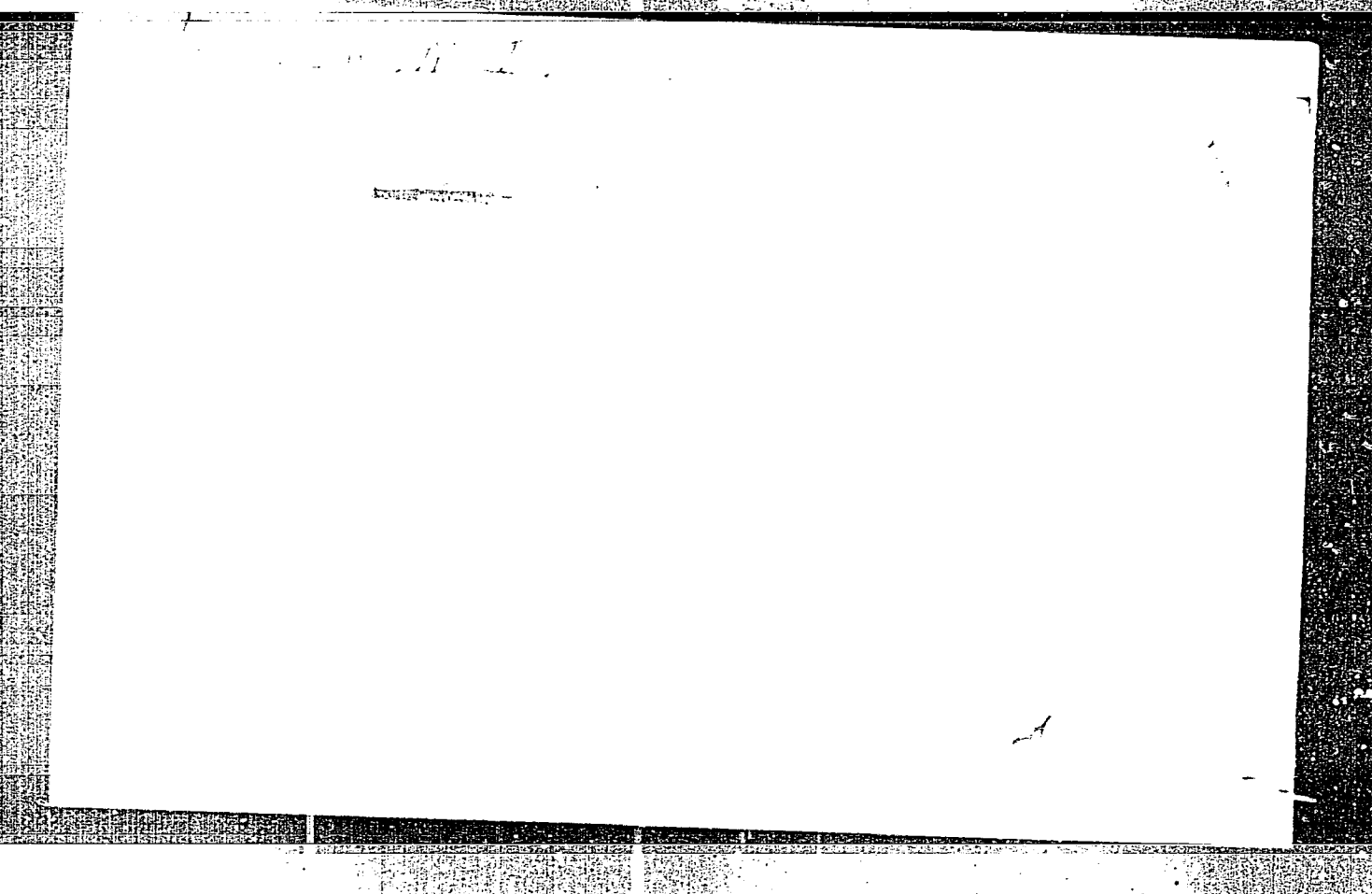
CIA-RDP86-00513R000412820C

1. Introduction On the
subject of the

2. Conclusions

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CIA-RDP86-00513R000412820



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USSR/Mathematics - Approximation Mar/Apr 51

"Approximation of Certain Transcendental Numbers:
II. Approximation of Certain Numbers Connected
With Velerstrass' P-function (in the Theory of
Elliptic Integrals)," N. I. Fel'dman

"Is Ak Nauk BSSR, Ser Matemat" Vol XV, No 2,
pp 153-176

Establishes, for certain transcendental numbers z ,
inequalities of the form $|z - x| \geq f(H, n)$ and
 $|P(z)| \geq f(H, n)$ where x is algebraic number of

177945

USSR/Mathematics - Approximation Mar/Apr 51
(Contd)

deg n and height H , $P(z)$ is polynomial with in-
tegral (entire) rational coeff of deg n and
height H , and $f(x, y)$ is certain function. Sub-
mitted 15 Sep 49, by Acad I. M. Vinogradov.

177945

SOV/38-22-4-6/6

AUTHOR: Fel'dman, N.I.
 TITLE: On Simultaneous Approximation of the Periods of an Elliptic Function by Algebraic Numbers (O sovmeshnykh priblizheniyakh periodov ellipticheskoy funktsii algebraicheskimi chislami)
 PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1958, Vol 22, Nr 4, pp 563-576 (USSR)
 ABSTRACT: Let ω and ω_1 be the periods and $\varepsilon_2, \varepsilon_3$ the invariants of the Weierstraß \wp -functions. If $\varepsilon_2, \varepsilon_3$ are algebraic and ξ , and ξ_1 arbitrary algebraic numbers, then it holds

$$|\omega - \xi| + |\omega_1 - \xi_1| > e^{-\Lambda_0 n_0 N \ln^2 N}$$
; here it is

$$\Lambda_0 = \Lambda_0(\varepsilon_2, \varepsilon_3, \omega, \omega_1)$$
, n_0 the degree of the extension arising from the field of the rational numbers by adjunction of ξ and ξ_1 ; $N \ln N = n_0(\ln n_0 + \frac{\ln h}{n} + \frac{\ln h_1}{n_1} + 1)$; n and

Card 1/2

On Simultaneous Approximation of the Periods of an
Elliptic Function by Algebraic Numbers

SOV/38-22-4-6/6

n_1 are the degrees of ξ , ξ_1 ; h and h_1 the heights of ξ
and ξ_1 .

There are 5 references, 3 of which are Soviet, 1 German, and
1 American.

PRESENTED: by M.A. Lavrent'yev, Academician

SUBMITTED: July 8, 1957

1. Mathematics 2. Functions

USCOM:DC-60314

Card 2/2

16(1)

AUTHOR:

Fel'dman, N.I.

SOV/42-14-1-22/27

TITLE:

On the Transcendence of Numbers of Some Classes (O trans -
tsendentnosti chisel nekotorykh klassov)

PERIODICAL:

Uspekhi matematicheskikh nauk, 1959, Vol 14, Nr 1, pp 237-244 (USSR)

ABSTRACT:

In 1955 Roth [Ref 1] has shown that α is transcendental if
 $\left| \alpha - \frac{p}{q} \right| < \frac{1}{q^k}$, $k > 2$, $(p, q) = 1$ has infinitely many integral
solutions p, q . The author shows (theorem 1) that this theorem
is also valid for $k > 1$ if q in essential consists of powers of
fixed prime numbers. Theorem 2 is contained in Th. Schneider,
"Einführung in die transzendenten Zahlen", Göttingen 1957.

Theorem 3: Let the coefficients of the series $f(x) = a_0 x^{m_0} + \dots$
 $\dots + a_n x^{m_n} + \dots$ (radius of convergence $R > 0$) be rational numbers.

Let $\lim_{n \rightarrow \infty} \sup \frac{m_{n+1}}{m_n} = c > 1$, $\lim_{n \rightarrow \infty} \frac{\ln Q_n}{m_n} = 0$, where Q_n is the common

Card 1/2

On the Transcendence of Numbers of Some Classes SOV/42-14-1-22/27
denominator of a_0, \dots, a_m . Let p and q be integral and
 $0 < |p| < Rq^{1-\frac{1}{c}}$. Then $f(\frac{p}{q})$ is no algebraic irrational number.
There are 5 references, 2 of which are Dutch, 2 German, and
1 English.

SUBMITTED: May 28, 1957

Card 2/2

TROST, Ernst; FEL'DMAN, N.I. [translator]; GEL'FOND, A.O., red.

[Prime numbers] Prostye chisla. Moskva, Gos.izd-vo fiziko-
matem.lit-ry, 1959. 135 p. Translated from the German.
(MIRA 14:2)

(Numbers, Prime)

89530

S/044/60/000/008/002/035
C111/C222

/6.6500

AUTHOR: Fel'dman, N.I.

TITLE: On the approximation of the number π by algebraic numbers of fields generated by the roots of unity

PERIODICAL: Referativnyy zhurnal. Matematika, no.8, 1960, 18, abstract no.8560. Tr. Mosk. geol.-razved. in-ta, 1959, 36, 188-198

TEXT: The author considered the question on the approximation of the number π by algebraic numbers ξ (Izv. AN SSSR, Ser. matem., 1951, 15, no.1, 53-74) and obtained the estimation

$$|\pi - \xi| > \exp \left\{ -\gamma \nu (1 + \nu \ln \nu + \ln H) \lambda \ln(2 + \nu \ln \nu + \ln H) \right\}, \quad (1)$$

where ξ is an algebraic number of degree ν and the height H , while γ is an absolute constant.

In the abstracted article the author gives an estimation more exact than (1) for the special case where ξ are algebraic numbers belonging to the fields of the roots of unity.

Theorem 1: Let n be an arbitrary natural number, $\xi > 0$; let $K = R(e^{2\pi i/n})$ be a field arising from the field of rational numbers by adjoining the

Card 1/2

89530

S/044/60/000/008/002/035

C111/C222

On the approximation of the...

number $g = e^{2\pi i/n}$; let ξ be an arbitrary number of this field with the degree ν and the height H . If then $\ln n > \xi \ln H$ then there exists a constant number Λ_0 depending on ξ so that the inequality

$$|\pi - \xi| > \exp(-\Lambda_0 \varphi(n) N \ln N)$$

$$N = \varphi(N) + \frac{\varphi(N) \ln(H+2)}{\nu_1 \ln \ln(H+2)}$$

is satisfied, where $\varphi(n)$ -- Euler function.

With the aid of theorem 1 the author obtains an estimation from below for $|\pi x - \cos \pi y|$ for rational $x \neq 0$ and y .

[Abstracter's note: The above text is a full translation of the original Soviet abstract.]

Card 2/2

16(1)

AUTHOR:

Fel'dman, N.I.

SOV/20-126-6-16/67

TITLE:

On the Measure of Transcendency of Number π and of the Logarithms of Algebraic Numbers

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1214-1215 (USSR)

ABSTRACT:

The function

$$\phi(H, n, \xi) = \min_{|a_k| \leq H} |a_0 + a_1 \xi + \dots + a_n \xi^n|$$

where a_k is integer rational, $\sum a_k^2 > 0$ is denoted as the measure of transcendency of a number ξ .

The author gives the following estimations :

$$\phi(H, n, \ln \alpha) > e^{-\gamma_1 n^2 \ln(n+1)(1+n \ln n + \ln H) \ln(2+n \ln n + \ln H)}$$

(1)

$$\phi(H, n, \pi) > e^{-\gamma_2 n(1+n \ln n + \ln H) \ln(2+n \ln n + \ln H)}$$

Here γ_1 depends only on the algebraic number α and on the

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choice of the Logarithm branch, γ_2 is an absolute constant. H and n are arbitrary and independent from each other. The deduction of the formulas (1) is based on the methods of A.O. Gel'fond [Ref 9]. D.D. Mordukhay - Boltovskiy is mentioned.

There are 9 references, 4 of which are Soviet, 3 German, 1 English, and 1 Dutch.

ASSOCIATION: Moskovskiy geologo-razvedochnyy institut imeni S.Ordzhonikidze (Moscow Institute for Geological Reconnaissance imeni S. Ordzhonikidze)

PRESENTED: March 16, 1959, by P.S. Aleksandrov, Academician

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AUTHOR: Fel'dman, N.I.

TITLE: On the Measure of Transcendency of the Number π

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1960,
Vol. 24, No. 3, pp. 357-368

TEXT: The paper contains detailed proofs for the results announced in
(Ref. 10) on the estimation from below of the magnitudes $|\pi - \xi|$ and
 $|a_n \pi^n + \dots + a_1 \pi + a_0|$, where ξ is an algebraic number of n-th degree.

There are 8 lemmata and 2 theorems. For the proofs the author uses ideas
of O.A. Gel'fond (Ref. 7) and an older own paper (Ref. 5).

There are 10 references : 4 Soviet, 4 German, 1 Dutch and 1 English

PRESENTED: by I.M. Vinogradov, Academician

SUBMITTED: April 10, 1959

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16.4/00

AUTHOR: Fel'dman, N. I.

TITLE: On the Approximation of the Logarithms of Algebraic Numbers
by Algebraic Numbers

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya,
1960, Vol. 24, No. 4, pp. 475-492

TEXT: Theorem 1: Let $\ln \alpha_1, \dots, \ln \alpha_m$ be linearly independent
logarithms of the algebraic numbers $\alpha_1, \dots, \alpha_m$. There exists a
constant $\Lambda_0 = \Lambda_0(\ln \alpha_1, \dots, \ln \alpha_m)$, such that for arbitrary
algebraic numbers ξ_1, \dots, ξ_m it holds

$$(18) \quad |\ln \alpha_1 - \xi_1| + \dots + |\ln \alpha_m - \xi_m| > H^{-\Lambda_0(n \ln(n+2))^{1+1/m}}$$

where n is the degree of the field $R(\alpha_1, \dots, \alpha_m; \xi_1, \dots, \xi_m)$

$$(19) \quad H = \exp \left\{ n \left(\frac{\ln h_1}{n_1} + \dots + \frac{\ln h_m}{n_m} \right) \right\}$$

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and $n_1, h_1; \dots; n_m, h_m$ are the degrees and heights of the numbers

ξ_1, \dots, ξ_m , where $n < \sqrt[n]{\ln H}$.

Theorem 2: Let $\alpha \neq 0, 1$ be a fixed algebraic number, $\ln \alpha$ a fixed
of its value logarithm. There exists a constant $\Lambda_1 = \Lambda_1(\ln \alpha)$,
such that for every algebraic number ξ of degree n and height H ,
where $n < \sqrt[n]{\ln H}$, it holds

$$(48) \quad |\xi - \ln \alpha| > H^{-\Lambda_1 n^2 \ln^2(n+2)}$$

Theorem 3: Let $\alpha \neq 0, 1$ be a fixed algebraic number, $\ln \alpha$ a fixed
value of its logarithm. There exists a constant $\Lambda_2 = \Lambda_2(\ln \alpha)$,
such that

$$(49) \quad |P(\ln \alpha)| > H^{-\Lambda_2 n^2 \ln^2(n+2)}$$

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where $P(z) \neq 0$ is a polynomial with integer rational coefficients of degree n and height H , where $n \leq \sqrt{\ln H}$. (49) is obtained from (48) according to the method of (Ref.3). Theorem 2 follows from theorem 1 (specialization). The inequality (18) is obtained by the same method by which the author determined in (Ref.6) the measure of transcendence of π . He essentially used the method of A.O. Gel'fond (Ref.7). The proof of theorem 1 is based on 11 lemmata (partially known).

D.D. Mordukhay-Boltovskoy is mentioned in the paper.

There are 9 references: 6 Soviet, 1 German, 1 English and 1 French.

[Abstracter's note: (Ref.3) is a paper of the author in Izvestiya Akademii nauk SSSR, 1951, Vol. 15, 53-74; (Ref.6) is a paper of the author in Izvestiya Akademii nauk SSSR, 1960, Vol.24, 357-368].

PRESENTED: by J. M. Vinogradov, Academician

SUBMITTED: May 29, 1959

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Measure of transcendence of the number π . Izv. AN SSSR. Ser. mat. 24,
no. 3:357-368 My-Je '61. (MIRA 14:4)

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(Numbers, Transcendental)

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